"During their seal hunting and halibut fishing expeditions they dreaded to see one of these creatures, as they seemed to delight in pursuing the Haidas and smashing up their canoes. When this happened the Indians were thrown into the sea and drowned. After a period the spirits of the drowned Indians were supposed to enter the Killer Whales and to be controlled by Het-gwan-ta-na.

"Long ago there were two warriors, who started off in their canoe to challenge the Killer Whale. Before long they found themselves surrounded by a big school of Killer Whales, who attacked and badly damaged their canoe. One of the men swore an oath that he would kill as many as he could before he himself was transferred into one. He was drowned, and his companion, clinging to the smashed canoe, was finally blown on to an island and rescued.

"His rescuers searched for the body of his friend; then one evening they heard strange noises as if from beneath the ground. Suddenly they saw large quantities of fish of all descriptions floating up dead, amongst which was a monstrous Killer Whale, dying with a large wound in its belly. The whale finally died, and its body was washed up on the beach. The medicine man of their tribe said 'that he had had a vision and saw the Indian who was drowned attack the chief of the Killer Whales and gave it its death stroke.' In doing this, he became the chief of Killer Whales and lord of Het-gwan-ta-na, the Lower regions."

Mr. Cotton adds that the South Australian Field Naturalist Section would be pleased to hear of any further Australian records of Killers.—[Eds.]

AUSTRALIAN PEARLY NAUTILUS.

By Tom Iredale.

(*Contribution from The Australian Museum, Sydney, N.S.W.*)

The Pearly Nautilus, as a relict species of great beauty and form, has always been a source of interest, scientifically, as well as popularly. That more than one species existed has always been admitted, but the exact number of living species has not yet been determined. Up to the present time no living specimen has been secured in Australian waters, though I have been told of some seen off Dunk Island, North Queensland. Mr. Chas. Hedley secured a shell at Murray Island, with remains of muscle scar attachment, while recently Mr. G. P. Whitley picked up a shell at Fraser Island in similar condition. On a stretch of beach below Cape Bedford, North Queensland, I counted over one hundred broken shells, while at the Mission Station, there was a large case full of perfect specimens picked up at various times along this beach within a distance of about one mile. Obviously all these had not drifted hundreds of miles, and it seems certain there is some breeding place in North Queensland. Mr. G. P. Whitley has now sent me a very fine shell from Pelsart Island, Abrolhos Group, Western Australia, which also retains portion of the muscle scar flesh, suggesting there is a breeding place in Western Australia also. This shell is very different from the Queensland ones, and instigated this review. When

Linné named *Nautilus pompilius,* Rumph's illustration is the first one with exact locality agreeing with the locality "In India" vaguely added by Linné, so that the type locality can be fixed as Amboina. Rumph's painting shows a rather small imperforate shell with rather distant banding continuous to edge, some twenty-two or three wrinkly bands.

The North Queensland shells all agree in their somewhat small size, not exceeding 6 inches in diameter, but with the painting very different, only some twelve to fourteen bands clearly separable at periphery, not continuing to edge, and not as wrinkled as in the preceding figure, apparently also of different colour, lake not brown.

The Western Australian specimen collected by Whitley is a much larger shell, eight inches in diameter, still imperforate, but with different banding, the bands being interrupted, and, though some twenty-four in number, they are quite restricted in range, the posterior half of the shell being bandless.

Other Nautiloid species show an umbilical cavity, varying from very small to very large, and there is confusion among these also. Generally, the species with the very large umbilicus is a large shell, and is commonly known as the King Nautilus on this account. The Nautilus, with the medium-sized umbilicus, varies in the nature of that, while there is another with a very small perforation.

It will be best to display these systematically as the names have been confused.

Nautilus pompilius, Linné.

Nautilus pompilius Linné, Syst. Nat., x. ed., p. 709, January, 1758. In India.

Rumph's citation being first one determinable with locality, so that Amboina is here selected as type locality.

As most imperforate shells have been classed under this name, its exact range is at present indeterminable, "Eastern Archipelago to Feejees," recorded by Bennett, eighty-five years ago, being accepted by most writers without question. As noted above, the Amboina form appears distinctive, and has not yet been met with in Australian waters.

Nautilus alumnus, *sp. nov.*

Nautilus pompilius, of Australian writers, Brazier, Hedley, etc., recording shells from Queensland, drifted specimens from New South Wales.

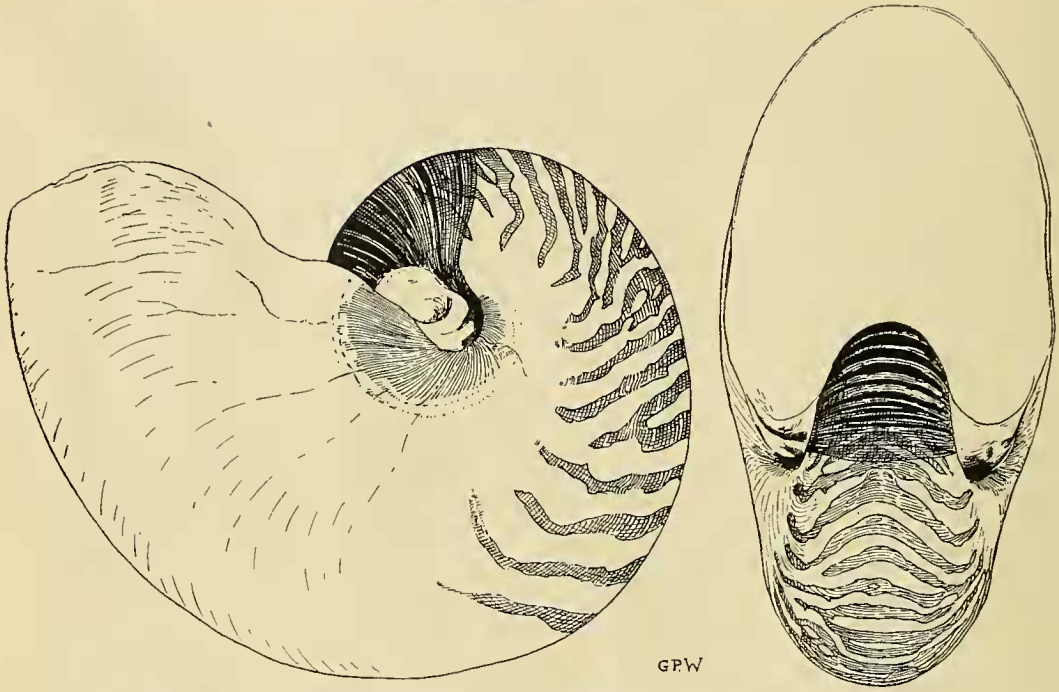
This differs from the Amboina shell, as above defined, and all the shells seen are in agreement in coloration and design.

There is a record of a living specimen from Yorke's Peninsula, South Australia, A. R. Riddle, Trans. Roy. Soc. South Austr., Vol. xliv., p. 257, 1920, which is not acceptable.

Nautilus repertus, *sp. nov.*

Nautilus ambiguus Sowerby, Thes. Conch., Vol. ii., p. 464, pl. xcvii., fig. 2, 1849. No locality given. Not *Nautilus ambiguus* Fichtel & Moll, Test. Micr., 1798, 62 (Sherborn).

Shell large, imperforate, brownish umbilical patch, with white band separating this from the narrow peripheral bands, which are orange brown, separate, only extending on half the shell, the major portion being white.



It will be noted that the coloration and size are of the *Scrobiculatus* style, but this species is imperforate.

The specimen sent by Mr. Whitley from Pelsart Island, Abrolhos, W.A., measures 8½ inches across, the depth 6½ inches, the width of the mouth 4 inches. Mr. Whitley has also forwarded an excellent drawing of a shell, W.A. Mus., Regd. No. 12976, from Rottnest Island, which is here reproduced. It seems even a little larger, the drawing giving a little over 9 inches, 7 inches, 4-1/5th inches respectively, but in every detail it agrees with the specimen in hand.

NAUTILUS STENOMPHALUS, Sowerby.

Nautilus stenomphalus Sowerby, Thes. Conch., Vol. ii., p. 465, pl. xcvii., fig. 3, 1849. No locality given = North Queensland.

This is quite distinct through the occurrence of a small umbilical perforation. Coloration and size similar to that of *N. macromphalus,* umbilicus less than half an inch in diameter, sides steep, umbilical area sloping, coloration lake, peripheral bands separate but tending to merge, not running into umbilicus, leaving a white circumbilical area.

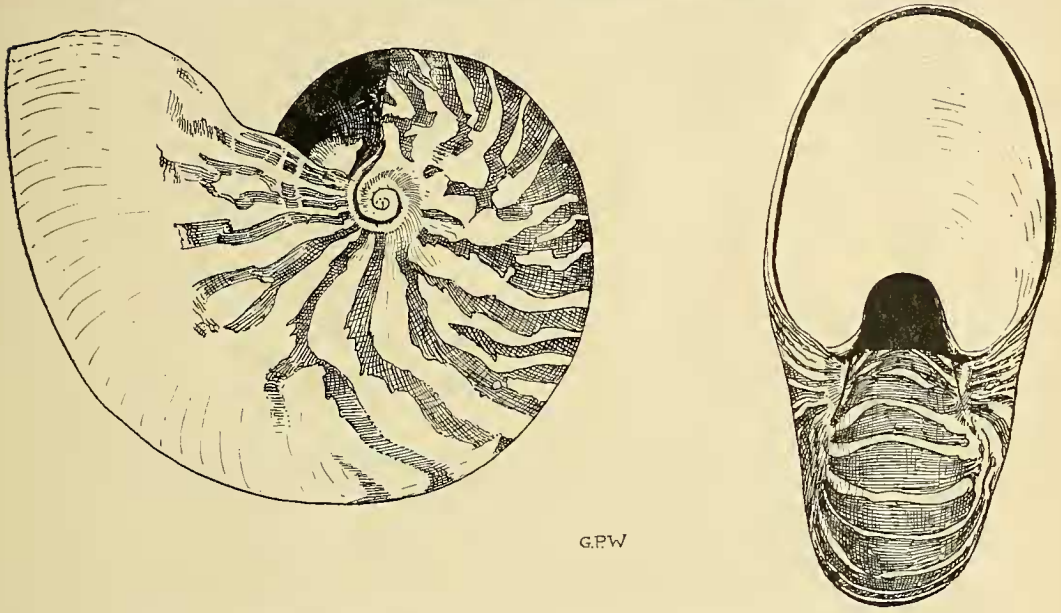
NAUTILUS MACROMPHALUS, Sowerby.

Nautilus macromphalus Sowerby, Thes. Conch., Vol. ii., p. 464, pl. xcviii., figs. 4-5, 1849. No locality = Island of Pines, New Caledonia.

This very distinct form with wide umbilicus was localised by Bennett, the wide umbilicus, less than an inch in diameter, having sloping sides, the colouring being lake, broad bands separate on periphery, running into umbilicus and extending to the mouth but disappearing towards the periphery posteriorly.

Apparently the common New Caledonian species. Shells occur on the Queensland coast not infrequently.

The figure here presented by G. P. Whitley of a Western Australian shell from Geraldton, W.A. Mus., No. 11460, agrees very closely with Sowerby's figure, but autoptical comparison may necessitate separation.



In the Austr. Mus. Mag., Vol. vii., p. 112, 1940, there is a photograph of a Pearly Nautilus brought alive from Maré Island, Loyalty Group, which seems to be of this species.

NAUTILUS SCROBICULATUS, Solander.

Nautilus scrobiculatus Solander, Catalogue Portland Mus., p. 182, *ante* April 24, 1786. New Guinea, citing Lister, 552, 4, and Knorr, iv., 22, 1. Cf. Proc. Mal. Soc. (Lond.), Vol. xii., p. 90, 1916.

Nautilus umbilicatus Lamarck, Hist. Anim. s. Verteb., Vol. vii., p. 633, 1822. First reference, Lister, Conch., t. 552, fig. 4.

Nautilus umbilicatus "Lister," Sowerby, Thes. Conch., Vol. ii., pl. xcviii., fig. 7, 1849. No locality given. Noted there was a prior *N. umbilicatus* Linné.

Nautilus perforatus Conrad, Journ. Ac. Nat. Sci. Philad., Vol. i., p. 213, 1849. Am. Journ. Conch., Vol. ii., p. 101, 1866.

Nautilus texturatus Gould, Proc. Zool. Soc. (Lond.), 1857, p. 20, June 6; introduced for the Listerian shell, restricting *scrobiculatus* to a smooth one!

This form with the large steep-sided umbilicus and rough surface has been known from the earliest conchological times, being separated in Lister's work, issued in 1685-92. It is immediately recognised through its

roughened surface, but as some are smoother than others, Gould separated two species, but as no localities were known, and he cited Lister's shell his name is invalid. Bennett gave as localities "Solomon Islands, New Georgia, New Britain, and New Ireland," and this form occurs (drifted) in North Queensland.

Shell large, usually larger than *pompilius*, although Lamarck gave the latter as 7 inches 8 lines, a fine sculpture of microscopic concentric wavy lines present, umbilicus broad, over an inch in diameter, the sides steep, colouring deep brownish orange, confluent on periphery, bands, narrow, running into umbilicus, the posterior half of the shell unbanded.

NOTES ON DISTRIBUTION OF AUSTRALIAN FINCHES.

Compiled by A. I. Ormsby.

(Period: February-November, 1943.)

During the above period I have been on the Atherton Tablelands, between Ravenshoe and Herberton, Queensland, travelling considerably in and around the locality.

As a aviculturist, formerly specialising in finches (I have kept and bred most Australian species), I was naturally on the look-out for field notes. To my surprise, during the whole time I was on the Tableland, I only encountered two species, namely, the Black-rumped Parson Finch, *Poephila atropygialis*, and the Red-browed Finch, *Aegintha temporalis*. The former was quite common in the vicinity of camps, one camper informing me that he was feeding about 40 at the cookhouse. One pair built a nest in an old lemon tree only a few yards from the camp. Unfortunately, owing to a move, I was unable to continue observations. This nest was built in March before the wet season was completely finished. Just as in the aviary, the rough structure was completed in a couple of days. Unlike the former, the Red-browed Finch could be found in large flocks, particularly in low bushes along creeks and watercourses in open country. The Red-browed Finch is the shyer of the two birds, but frankly there are few really "wild" birds on the Tablelands in the sense that they are shy and timid as we see them around Sydney. The finches are all found in open country. I have never found them in jungle or thick wooded country. I am quite convinced that if there were any other species of finch about I would have observed them, particularly on account of their ground feeding, and the tiny trumpet notes of the Zebra could scarcely have eluded me. Incidentally, the Zebra Finch was quite common around Townsville. Could the areas of dense jungle have been a barrier to this and other finches?

Another matter, possibly of interest, was the absence from the Tablelands of the Fairy Wrens, excepting one species, the Red-backed Wren, *Malurus melanocephalus*. This dainty little bird was particularly tame, occasionally coming into the tent, and I have observed them from a range of a few feet. Possibly the same factors operate with this family as with the finches. I never saw these birds in the jungle, and seldom more than a couple of feet from the ground.